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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,656	02/04/2004	Vera Buchholz	PO8046/LcA 36,416	3531

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EXAMINER	
MULLIS, JEFFREY C	
ART UNIT	**PAPER NUMBER**
1711	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/771,656	BUCHHOLZ ET AL.	
	Examiner	Art Unit	
	Jeffrey C. Mullis	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The various parameters recited starting at paragraph 59 of applicants published specification are undefined. Correction is required.

Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. If applicants "weighted subtraction" is defined by the subject matter of paragraphs 59 et seq of their published application then claim 2 is unenabled in that the lack of definition of the various parameters renders this discussion unclear.

The limitation "based on polybutadiene" was not present in the specification as filed nor can it be inferred from any other information in the specification and is therefore new matter.

Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants specification does not define what is meant by "weighted subtraction" and this term is therefore unclear.

It is not clear what is meant by "at least one styrene" in that styrene encompasses only a single material, not more than 1.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolf et al (US 2003/0119199).

Wolf discloses a process in which Raman is used to monitor a graft polymerization and in which reaction partners are added based on said monitoring (abstract). Note the example at paragraph 115-120 for production of ABS and use of weighted subtraction.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Wenz (US 2003/0130433).

Wenz disclose a process in which ABS is produced while monitoring using Raman (abstract) and maintaining desired monomer rubber ratios (paragraph 65). With re to the term "weighted subtraction" in the claims as peak intensity and area vary depending on the material being observed by Raman any concentration determined would have to be determined based on

the observed materials response to radiation as would be understood by those skilled in the art and the limitation of claim 2 would appear to have little meaning as a limitation.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-15 of copending Application No. 10/281345. Although the conflicting claims are not identical, they are not patentably distinct from each other because the process of synthesizing the graft copolymer as recited by the copending claims is disclosed by the copending specification to include maintaining monomer and rubber ratios.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monsanto (GB 1200 414), cited by applicants in view of Schrof et al. (US 6,278,518) and/or Long et al. (US 2002/0156205) further in view of Cooper (US 5,596,196) or Leonard (US 3,723,007).

Monsanto disclose process for producing ABS (Example 1) in which the rate of monomer addition is controlled (page 5, lines 48-55) such that unreacted monomer is present at less than 10% based on rubber (page 5, lines 50-55).

Monsanto does not disclose the use of Raman for monitoring their reaction

Long discloses that Raman can be used to monitor polymerization of unsaturated monomers to control the reactor constituents and that Raman has the advantage of in situ reliable real time analysis. Note paragraphs 6-9 in this re.

Schrof discloses that the advantages of monitoring polymerizations using Raman include high sensitivity and short reaction times and insensitivity to water. Note column 4, lines 46-60.

Cooper and Leonard at column 9, lines 9-36 and column 1, lines 7-38 respectively disclose use of Raman in which peak intensities are weighted and subtracted.

It would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to use Raman to monitor the process of Monsanto as taught by the secondary references motivated by the need of the primary references for a process of monitoring their polymerization and by the teachings of the secondary references that Raman will meet this need in a particularly efficient manner absent any showing of surprising or unexpected results.

With re to weighted subtraction, use of such in the process of Monsanto as modified by Long and Schrof would have been obvious to a practitioner having an ordinary skill in the art at the teem of the invention in order to be able to use Raman to find concentrations absent any showing of surprising or unexpected results.

Applicant's arguments filed 4-24-07 have been fully considered but they are not persuasive.

The rejection pertaining to "weighted subtraction" with regard to 35 USC 112 first and second paragraphs only pertains to claim 2. The term "weighted subtraction" could reasonably mean any method in which weighting and subtraction to arrive at concentrations is used in Raman. If so, the newly cited art would appear to disclose such clearly. However, given applicants discussion in applicants' specification which fails to define their parameters in the specification it is not clear if this is what applicants intend. Wolf, similarly to applicants also fails to define their parameters. Applicants discussion of what the various parameters mean in their remarks was not present in the specification as filed and was therefore not present at filing to clarify the claims.

Wolf in Figure 3 and Wenz in Figure 1 disclose maintaining styrene content at less than 12% based on polybutadiene in their process and disclose "weighted subtraction" ipsis verbis.

With re to Monsanto, patentees in the "Example" at page 6, lines 22-46 produce a latex from butadiene and acrylonitrile first. Subsequently at page 6, lines 46 et seq styrene and acrylonitrile monomer is added to latex and polymerized as in the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey C. Mullis whose telephone number is 571 272 1075. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seidleck James, can be reached on M-F. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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5-31-07

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